

REMARKS

Claims 19-23, 26-35, 38 and 39 are pending. In the Office Action mailed 5 September 2008 all of the claims were rejected based on multiple grounds under Section 103. First, it is noted that claims 19, 24, 25 and 33 are once more rejected over Boucard (WO 03/006710) in view of DE 41 11 174; with claims 20-22, 26, 27 and 35 rejected in further view of Takeuchi (U.S. 6,024,861) and Lashmore (U.S. 5,158,653); with claim 23 rejected in further view of Takeuchi and Lashmore (U.S. 5,158,653) and further in view of GB 1521130; and with claims 29-32 rejected in further view of de Hek (U.S. 4,436,591).

As indicated in the Office Action, all of these rejections can be overcome once a translation of the German priority document is verified. Applicants submit herewith an English translation of the German priority document and a statement of verification attesting that this English translation is a true and complete translation of the German priority document. The statement of verification establishes that the German priority document overcomes the January 23, 2003 publication date of the Boucard reference (WO/03/006710) with respect to subject matter relied upon in the Boucard reference to reject the claims. Removal of these rejections based on the Boucard reference is therefore requested.

Response to Other Rejections Under Section 103:

The Examiner has also rejected claims 19, 24, 25 and 28 under 35 U.S.C § 103(a) as obvious over Glen (3,963,588) or Takada (U.S. 4,859,291) in view of: DE 41 11 174 (DE '174). Claims 20-22, 26, 27 and 35 are rejected on this same art but in further view of Lashmore, while the other dependent claims are rejected based on some or all of the foregoing references alone or in combination with additional art of record. Applicants respectfully traverse all of the rejections based in whole or part on Glen or Takada in view of DE '174.

The rejections under Section 103 are traversed because they rely upon DE '174 as though that reference discloses applicants' process of using an eddy-current probe, i.e.,

"filling the material separation by introducing further material with an electrolytic deposition process while inducing mechanical oscillations in a region of the substrate adjoining the material separation by positioning an eddy-current probe to provide an interaction volume about the material separation"

However, the DE '174 reference only appears to disclose use of an electromagnet (3) to vibrate a continuous ferromagnetic rod-shaped workpiece (6). Although an electromagnet could be used to generate a changing magnetic field which, in turn, might create an eddy current, it is clear from the DE '174 abstract that the electromagnet is used for a different purpose, i.e., to cause "the rod to vibrate." Furthermore, it is only the applicants who teach use of an eddy current probe "to generate mechanical excitations in the region around the material separation ..."

While the Glen and Takada references do relate to plating processes, it is not seen that any combination of the prior art will render obvious the now-claimed subject matter of claim 19. That is, Claim 19 now requires that the frequency of the eddy-current probe is varied during the deposition process. More specifically, claim 19 further requires that initially the interaction volume extends a maximum penetration depth into the opening while a portion of the opening at a maximum depth from the surface is filled. Then, as the opening is filled, the penetration depth of the interaction volume is reduced by increasing the frequency of the eddy-current probe. It is respectfully submitted that this arrangement is distinct from and non-obvious in view of the prior art. In this regard, the applicants disagree with the reliance upon DE '174 to reject claim 25 (now canceled) which recited similar subject matter, as the reference does not at all disclose use of variable frequencies to set a depth of penetration of the mechanical vibration into the material separation. This must be error since DE '174 has no disclosure relating to a material separation or to a depth parameter with respect to a substrate surface.

Further, claim 22 is amended to more clearly distinguish over the combination which includes Lashmore. Although Lashmore (see col. 3, line 65 to col. 4, line 10) provides disclosure relating to pulsing between deposition parameters, that is stated therein as for the

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purpose of avoiding codeposition and creating alternating layers. In contrast to Lashmore, the method of claim 22 now expressly relates to formation of an alloy comprising at least first and second constituents. The current is varied in a repetitive manner in order to facilitate mixing constituents of the alloy.


Applicants submit that all of the claims as now presented patentably distinguish over all of the prior art and allowance is requested.

Conclusion

No additional fees are required. Nonetheless, the Commissioner is hereby authorized to charge any appropriate fees due in connection with this paper or credit any overpayments to Deposit Account No. 19-2179.

Respectfully submitted,

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